Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Communications Assistance for Law Enforcement Act	)	CC Docket No. 97-213
	)	

REPLY COMMENTS OF
MOULTRIE INDEPENDENT TELEPHONE COMPANY

1. Moultrie Independent Telephone Company (Moultrie), a small rural independent telephone company serving one small village in central Illinois, by counsel, pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. § 1.415, submits its Reply Comments to the Further Notice of Proposed Rulemaking (*FNPRM*) in the above reference proceeding,[1] and in support whereof states as follows:

Background

2. By way of background, Moultrie is a rural independent telephone company in Illinois serving approximately 800 access lines. Although Moultrie serves a rural area of Illinois, it provides its subscribers with state-of-the-art telecommunications services. Moultrie's vision of telecommunications in the near future includes the migration of circuit-switched networks to packet-switched information service networks, since packet-switching is more economically efficient. Moultrie believes that an Internet Protocol (IP) based packet-switched network will provide ubiquitous information services to residential and business customers within the next three to five years. The services provided over this system may include voice (including voice mail, call forwarding, call waiting *etc.*,) video, data, e-mail and Internet because it will be impossible to

[1] Communications Assistance for Law Enforcement Act, Further Notice of Proposed Rulemaking, FCC 98-282, CC Docket No. 97-213, (Nov. 5, 1998) (*FNPRM*).

differentiate whether a communication carried in a packet-switched network is an information service or a telecommunications service, especially after gateway functionality becomes available in customer premises equipment. Although the Commission states that "Section 103(b)(2)(A) of CALEA expressly excludes "information services" from its assistance capability requirements... [and] packet data and packet-switching technology is subject to these requirements only to the extent it is used to provide telecommunications services, and not for information services . . ."[2] the only practical distinction between the two in a pure packet-switched network is that which regulators impute on an outmoded distinction between types of communications handled on a dedicated circuit for the duration of the transaction (call) within a circuit switched network. Information services and telecommunications services will be combined on a facility (*e.g.*, a fiberoptic line), and will be provided over the same network. There are no distinctions between telecommunications services and information services within the packet-switched environment.

Rules Enacted For Circuit-Switched Networks
Cannot Be Applied to Packet-Switched Networks

3. Moultrie asserts that CALEA was drafted with a circuit-switched communications network in mind. Unfortunately, the network configurations of a packet-switched network are not interchangeable with those of a circuit-switched network, except for the current "last mile" segment, and rules enacted for a circuit-switched network cannot be practically applied to a packet-switched network.

4. For example, in a packet-switched telecommunications network, a single residential subscriber may simultaneously operate one telephone hookup, three televisions set up to receive video services and two computers with Internet and e-mail access. Let's assume for the sake of

[2] *NPRM* at par. 63.

argument that in the Smith household at this very moment Mrs. Smith is on the telephone, Billy is watching television, and Suzy is conversing with a new friend in a chatrooom. In a packet-switched telecommunications network, the physical lines from Mr. Smith's telephone, Billy's television and Suzy's computer will meet in a gateway box located either inside or on an exterior wall of their house. This gateway will convert the analog or digital voice signal, the analog or digital video signal and the e-mail information into a single IP data stream that will consist of thousands of data packets. This single data stream will travel through a fiber optic drop from the gateway to a pedestal somewhere in the Smith's neighborhood. At this pedestal, the Smith family's IP data stream will be merged onto another facility (*e.g.*, a fiberoptic line) with other data streams from the Smith's neighbors. Depending on how many families live in the Smith's neighborhood, there could be literally hundreds of converging data streams carried over a single fiber facility.

5. In a packet-switched environment, absent additional capabilities likely involving both hardware and software, in order for law enforcement officials to monitor Mrs. Smith's telephone call they would have to acquire the analog signal before it reaches the gateway and is converged with the other signals. Once the voice, video, data and Internet signals are combined, they become one indistinguishable data signal. For real time surveillance by law enforcement personnel to be accomplished without interrupting the actual data transmission, software must be developed that can extract and reconfigure Mrs. Smith's voice packets. There are no content channels in a packet-switched telecommunications network. There is a single data stream containing thousands of individual packets. In addition, packet identifying information is not Automated Number Identification information, rather, it is in the first 5 bytes of each 53 byte packet, and there can be millions of packets traveling over a single fiberoptic cable.

6. In order to acquire the content of a telephone call, or the call identifying information of a call, software must be developed that can capture only those packets associated with the particular communication intercept authorized by a lawful court order. The software must be able to differentiate between a voice data packet and a video data packet and it must be able to differentiate a voice data packet from Mrs. Smith from a voice data packet from Mrs. Jones. However, as the Commission stated in its *FNPRM*, it is unlawful for a carrier to provide a law enforcement agency with any transmission that is not subject to a lawful court order. "With appropriate lawful authorization, the [law enforcement agency] is entitled to 'intercept, to the exclusion of any other communications, all wire and electronic communications carried by the carrier within a service area to or from equipment, facilities, or services of a subscriber.'" *NPRM* at par. 77, citing, 47 U.S.C. § 1006(b).

The Costs Associated With Providing Law Enforcement Agencies Access to a Single Telephone Call in a Packet-Switched Network Must be Absorbed by the Government, and Not the Service Providers

7. Developing the software and hardware necessary to extract and reconfigure data packets associated with particular transmissions for seamless real-time surveillance by law enforcement agencies will be expensive and time consuming. Carriers such as Moultrie must migrate to packet-switched networks because these networks offer the most economically efficient means by which telecommunications services may be provided -- lower costs to the service providers means lower rates to subscribers. However, any economic benefits achieved from migrating to a packet-switched network will be lost if the carriers themselves are required to develop the software and hardware necessary to conduct surveillance of a single telephone line in a packet-switched network.

8. Although Moultrie agrees that the policies CALEA was intended to address are important to the public interest, it will be difficult to address these issues in a cost-effective manner in a packet-switched telecommunications environment. The technological difficulties and costs, associated with providing law enforcement personnel with the ability to intercept the content of a telephone call in a packet-switched environment should not be borne by service providers and subscribers.

Conclusion

9. CALEA states that law enforcement personnel may gain access to the call identifying information of a subscriber's communications and to the content of such communications through "cost effective methods." In addition, CALEA "excuse[s] a failure to comply with the assistance capability requirements or capacity notices where the cost of compliance is wholly out of proportion to the usefulness of achieving compliance for a particular type or category of services or features." H.R.Rep. No. 103-827 at 28 (1994), *reprinted in* 1994 U.S.C.C.A.N. 3489, 3508. Unless law enforcement personnel or the government pay for the development of the software necessary to conduct surveillance in a packet-switched environment, carriers must be excused from their failure to comply with CALEA's assistance capability requirements.

Respectfully submitted,

Moultrie Independent Telephone Company

Irwin, Campbell & Tannenwald, P.C.
1730 Rhode Island Avenue, N.W.
Suite 200
Washington, D.C. 20036-3101
Tel. 202-728-0400

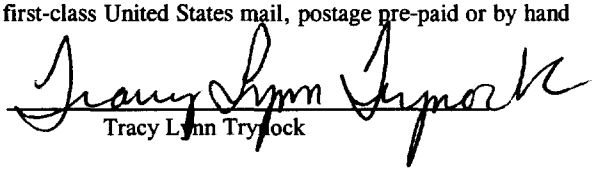
David A. Irwin
Tara S. Becht

By its Counsel

January 27, 1999

CERTIFICATE OF SERVICE

I, Tracy L. Trynock, hereby certify that on this 27th day of January, 1999, copies of the foregoing "Reply Comments of Moultrie Independent Telephone Company" have been served by first-class United States mail, postage pre-paid or by hand delivery upon the following:



Tracy Lynn Trynock

Chairman William E. Kennard*
Federal Communications Commission
1919 M Street, N.W., Room 814
Washington, D.C. 20554

Commissioner Michael Powell*
Federal Communications Commission
1919 M Street, N.W., Room 844
Washington, D.C. 20554

Commissioner Gloria Tristani*
Federal Communications Commission
1919 M Street, N.W., Room 826
Washington, D.C. 20554

Commissioner Susan Ness*
Federal Communications Commission
1919 M Street, N.W., Room 832
Washington, D.C. 20554

Commissioner Harold Furchtgott-Roth*
Federal Communications Commission
1919 M Street, N.W., Room 802
Washington, D.C. 20554

ITS*
1231 20th Street, N.W.
Washington, D.C. 20036

Douglas Letter
Appellate Litigation Counsel
Civil Division
Department of Justice
601 D Street, N.W., Room 9106
Washington, D.C. 20530

John Pignataro
Sergeant Detective Supervisor
Electronic Surveillance Technical Advisor
New York City Police Department
Building 610, Fort Totten
Bayside, NY 11359

Edward T. Norris
Deputy Commissioner, Operations
New York City Police Department
1 Police Plaza, Room 910
New York, NY 10038

Cellular Telecommunications Industry Assn.
1250 Connecticut Ave., N.W., Suite 200
Washington, D.C. 20036

SBC Communications, Inc.
1401 Eye Street, N.W., Suite 1100
Washington, D.C. 20036

AT&T Corporation
1120 20th Street, N.W., Suite 1000
Washington, D.C. 20036

Bellsouth Corporation et al.
1133 21st Street, N.W., Suite 900
Washington, D.C. 20036-3351

Preston Gates Ellis & Rouvelas Meeds LLP
Center for Democracy and Technology
1735 New York Avenue, N.W., Suite 500
Washington, D.C. 20036

Air Touch Communications, Inc.
1818 N. Street, N.W., 8th Floor
Washington, D.C. 20036

Wiley, Rein & Fielding
Personal Communications Industry Assn.
1776 K Street, N.W.
Washington, D.C. 20006

Perkins & Coie, LLP
Nextel Communications, Inc.
1201 Third Ave., 40th Floor
Seattle, WA 98101-3099

Kraskin, Lessee & Cosson
Rural Cellular Assn.
2120 L Street, N.W., Suite 520
Washington, D.C. 20036

Edward J. Wisniefski
Deputy Asst. Administrator
Office of Investigative Technology
Dept. of Justice
Drug Enforcement Admin.
8198 Terminal Road
Lorton, VA 22079

* denotes hand delivery

Wilmer, Cutler & Pickering
US West, Inc.
2445 M Street, N.W.
Washington, D.C. 20037-1420

Covington & Burling
Electronic Privacy Information Center
1201 Pennsylvania Ave., N.W.
Washington, D.C. 20044-7566

Ronald S. Neubauer
Intl. Assn. of Chiefs of Police
515 North Washington Street
Alexandria, VA 22311-2357

Shook, Hardy & Bacon
Metricom, Inc.
1850 K Street, N.W., Suite 900
Washington, D.C. 20006

Bell Atlantic Mobile, Inc.
Crowell & Moring, LLP
1001 Pennsylvania Ave., NW
Washington, DC 20004-2595

Southern Communications Services, Inc.
McDermott, Will & Emery
600 13th Street, NW
Suite 1200
Washington DC 20005-3096

GTE Service Corporation
Wiley, Rein & Fielding
1776 K Street, NW
Washington, DC 20006

American Mobile Satellite Corporation
Fisher, Wayland, Cooper Leader & Zaragosa
2001 Pennsylvania Ave., NW
Suite 400
Washington, DC 20006-1851

Texas Department of Public Safety
Dudley M. Thomas, Director
5805 N. Lamar Blvd
Box 4087
Austin, Texas 78773-0001

New Jersey State Police
Colonel Carl A. Williams
P.O. Box 7068
West Trenton, NJ 08628

Telecommunications Industry Association
2500 Wilson Blvd.
Suite 300
Arlington, VA 22201-3834

USTA
1401 H Street, NW
Suite 600
Washington, DC 20005-2164

Ameritech Corporation
1401 H Street, NW
Suite 1020
Washington DC 20005

ICO Services Limited
Morrison & Foerster LLP
425 Market Street
San Francisco, CA 94105-2482

Bell Atlantic
1300 Eye Street, NW
Suite 400 West
Washington, DC 20005-3314

* denotes hand delivery